REMARKS

This is in response to the Office Action mailed on November 24, 2004, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 1-16 remain pending in this application.

Claim Objections

Applicant draws the Examiner's attention the Preliminary amendment filed August 21, 2001 in which the claim objections cited by the Examiner were addressed. It will be noted from the preliminary amendment that Claim 10 refers to claim 8 only, and Claims 11 and 12 refer only to claim 1. The spelling mistake in claim 5 does also not appear in the claim as set out in the preliminary amendment.

§103 Rejection of the Claims

Claims 1-11 and 13-16 were rejected under 35 USC § 103(a) as being unpatentable over Maillard (EP 0912052 A1) in view of Morrison (U.S. 5,815671), and in view of Wendorf (U.S. 5,469,431).

Claim 12 was rejected under 35 USC § 103(a) as being unpatentable over Maillard (EP 0912052 A1) in view of Morrison (U.S. 5,815671), and in view of Wendorf (U.S. 5,469,431) and in view of Takahisa (U.S. 5,577,266).

Claim 1

It is submitted that the invention defined in claim 1 is not taught or suggested by the cited references, because the skilled person is provided with no motive for combining the disclosed teachings. Furthermore, the cited references in combination fail to teach or suggest all the features defined in claim 1. In particular, the feature of ECMs containing the control words in an encrypted manner, wherein at least a plurality of ECMs comprises control information to control the decryptor in such a manner that at least the time slots for second type of content signals are

maintained in the first type of content signals, is not described or even suggested in the cited references.

EP-A1-0 912 052 (hereinafter referred to as D1) discloses a method and apparatus for recording of scrambled digital data. The scrambled data is transmitted together with a control word for descrambling of the digital data. Both the control word and access criteria are used to build an Entitlement Control Message; this is a message sent in relation with a scrambled program (column 7, lines 17-23). Each service broadcast by a broadcast supplier comprises a number of distinct components. Each of these components of a service is individually scrambled and encrypted for subsequent broadcast (column 7, lines 28-35).

The method defined in claim 1 of the present application differs from the method disclosed in D1 in that D1 fails to disclose that at least a plurality of ECMs comprises control information to control the decryptor in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals. D1 further fails to disclose program signals comprising content signals of a first and second type, wherein the second type of content signals is inserted in time slots in the first type of content signals. Consequently, D1 doesn't disclose at least a part of the receivers having a storage medium to store such program signals. The absence of the first of the above-mentioned features has already been noted in the Office Action. Regarding the latter-mentioned features, D1 discloses (column 7, lines 44-48) that a multiplexer scrambles programmes and transmits the scrambled programmes, an encrypted EMM and encrypted ECMs to a transmitter of a broadcast centre. A receiver/decoder demultiplexes the signals to obtain scrambled programmes with encrypted EMMs and ECMs (column 8, lines 4-6). When recording, an entitlement message ECM' is used to replace the ECM in the scrambled data stream from the demultiplexer, and the combination of scrambled data and new entitlement message ECM' are recorded on a DVHS cassette (column 10, lines 20-25). Neither of the transmitted multiplex and scrambled data streams contains time slots in which a second type of data is inserted.

The effect provided by these features in combination is to help prevent unauthorised separation of the second type of content signals from the first type of content signals after insertion. Because the second type of content signals is inserted in time slots in the first type of content signals, the time slots correspond in duration to the parts of the second type of contents signals. Because the first type of content signals is scrambled using control words as scrambling keys, uninterrupted presentation of the content in the first type of content signals requires the timely presence of the control words. Because the control words are contained in ECMs in an encrypted manner using a second key and comprise control information to control a decryptor, the maintenance of the time slots is ensured. Provision of the control words after appropriate time delays forms an effective manner of enforcement.

US 5,815,671 (hereinafter referred to as D2) discloses an entertainment system consisting of program and auxiliary message materials to be transmitted over an assigned frequency band and stored for later retrieval and use (column 2, lines 17-20). The program materials are transmitted in the form of digital information data, to a multitude of receivers, each of which contain a memory to store in real time the program materials subscribed to for subsequent retrieval by the user in non-real time (column 3, lines 17-20). Message materials including announcements and commercials, requiring insertion in the entertainment program materials, are delivered to the receivers separately (column 3, lines 28-30). A break in the program material for insertion of message material such as a commercial is preceded by a program break flag, inserted as auxiliary information transmitted and stored along with the program materials (column 3, lines 38-41). The program break flag contains sufficient information to also find the precise message required for the break or to select the next message of a sequence of message materials or any of a combination of messages within predetermined categories suitable for the break (column 6, lines 35-40).

It is submitted that D2 has no bearing on the present invention. There is no disclosure of the problem of forced maintenance of time slots in a first type of content signals to prevent separation from second type of content signals. Thus, the skilled person is given no incentive to combine the teachings of D1 and D2. Indeed, D2 concerns exactly the opposite problem, because

D2 teaches how to select the most appropriate one of a number of available messages (column 6, lines 13-25). Even if the skilled person were to combine the teachings of D1 and D2, which is strongly denied, he would not arrive at the invention according to claim 1, because D2 does not teach ECMs containing control words in an encrypted manner and comprising control information to control a decryptor in such a manner that at least time slots for second type of content signals are maintained in the first type of content signals. Indeed, D2 discloses no ECMs at all.

US 5,577,266 (hereinafter referred to as D3) teaches broadcasting systems for transmitting data associated with audio or video program material to provide a listener with useful information regarding the program material (column 1, lines 13-17). The data stream is broadcast earlier in time than the corresponding program material is broadcast in order that, when the corresponding program material is first broadcast, data related to the program material are already available at the receiver (column 2, lines 12-17).

It is submitted that the skilled person involved with the same problem as the inventor would not consider applying the teachings of D3, because D3 discloses a system for broadcasting program material and associated data that does not rely on customized program source material and related apparatus in which the program and the data are linked at the program source level (column 1, lines 47-52). Thus, D3 discloses a system for solving exactly the opposite problem to that solved by the present invention. Furthermore, the features of the present invention that are absent from D1 are not to be found in D3 either. D3 does not disclose any form of scrambling or encryption, for instance.

US 5,469,431 (hereinafter referred to as D4) discloses a preferred organization of the many information streams which can be transmitted by a digital video transport system (column 4, lines 50-52). A portion of the electromagnetic spectrum is divided into bands. One of these bands is designated the System Band, and on one of its channels carries a file which is the Global Channel Map (column 4, lines 60-62). Individual channels may themselves be subdivided, by further time division multiplexing, into a number of services (column 4, lines 66-67). A listing of

all service locations in the digital transport system is contained in a Global Channel Map (column 5, lines 8-10). The Global Channel Map includes one Channel Map Table (column 5, lines 13-14). Two bytes identify the option fields to be included (column 5, line 46). One preferred option field is the absolute service identification number of the service carrying the control word messages (descrambling keys) for services in this channel (column 6, lines 6-7).

The skilled person seeking to address the problem solved by the method of claim 1 is not provided with any incentive to apply any teaching of D4 to D1, because D4 relates to the problems of maximizing the utilization of spectrum capacity and accommodating time-varying allocation of channels in a multi-channel multi-frequency band transmission system (column 2, lines 8-14). There is no description of the presence of time slots in the individual services. Even were the skilled person to combine D4 with D1, which is strongly denied, he would not find any disclosure of a plurality of ECMs comprising control information to control a decryption in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals.

Thus, it is submitted that the skilled person involved with the problem solved by the invention as defined in claim 1 is provided with no motivation, suggestion or incentive to combine the teachings of D1-D4. Even were he to make any combination of the teachings derivable from D1-D4, which is strongly denied, he could never arrive at a method as claimed, because none of the cited publications discloses that at least a plurality of ECMs broadcasted with the program signal comprises control information to control the decryptor in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals.

The invention according to claim 1 provides an effect not provided by any of the cited publications. In D1, the MPEG-2 stream that is decompressed and translated into a video signal for onward transmission to television set 2022 (column 8, lines 23-25) can be edited to skip any time slots that might be present, for example those containing advertisements. Such editing is also possible in the systems known from D2-D4.

The subject-matter of claims 2-13 is not obvious having regard to the state of the art, because these claims relate to methods comprising all the steps of a method according to claim 1. A similar reasoning applies to the subject-matter of claims 14-16, because these claims relate to a control device for a receiver for carrying out a method according to claim 1. Moreover, the control device according to claim 14 comprises a decryptor adapted to check the control information of the decrypted ECMs and to insert a time slot as indicated by the control information. As set out above, none of the publications D1-D4 teaches or suggests such ECMs.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-333-9972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ANDREW AUGUSTINE WAJS

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938
Minneapolis, MN 55402
408-333-9972

Date 02/21/05

By _____
Andre L. Marais
Reg. No. 48,095

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 21 day of February, 2005.

Dawn R. Shaw
Name

Dawn R. Shaw
Signature